



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/600,873 | 06/18/2003 | En-Jang Sun | | 6657 |

7590 01/25/2006
En-Jang Sun
P.O. Box 55-846
Taipei, 104
TAIWAN

EXAMINER

LOPEZ, AMADEUS SEBASTIAN

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3743

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/600,873 | | SUN, EN-JANG | |
| | Examiner | | Art Unit | |
| | Amadeus S. Lopez | | 3743 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☒ Claim(s) 2 and 8-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "311" and "31" have both been used to designate a lamp cover. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: On page 3 in line 22 and on page 6 in line 21, "droplet" should be replaced with -- droplet(s) --.
- Appropriate correction is required.

Claim Objections

4. Claim 1 is objected to because of the following informalities:
- In line 9, the word "leaden" should be replaced with -- laden --.
5. Claim 3 is objected to because of the following informalities:
- On page 9 in line 2, "droplet" should be replaced with -- droplet(s) --.
6. Claim 11 is objected to because of the following informalities:
- On page 11, in line 2, "droplet" should be replaced with --droplet(s) --.
- Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,966,937 to Yachi et al. in view of U.S. Patent No. 6,119,689 to Korman.

9. What is claimed in claim 1 is “ a personal isolation apparatus comprising: a hood for covering a patient’s body: a filter device connected to the hood having an exhaust fan secured therein and having a plurality of filters operatively filtering SARS virus and microorganisms as laden in the air streamflow as sucked from the hood by said exhaust fan; and an ultraviolet lamp and formed between the hood and the filter device and operatively killing the SARS virus and microorganisms as laden in the air streamflow as sucked from the hood.” What Yachi et al. disclose as shown in figure 1, is a patient isolation unit that has a flexible envelope (3) made of a flammable resin sheet that is attached to the frame body to cover the body of the patient. Using a broad interpretation of the claims, this flexible envelope is considered a hood. The patient isolation unit contains an ultraviolet lamp (31) shown in figure 25 by Yachi et al. that is used to sterilize germs, bacteria, and other microorganisms, which would include the SARS virus. The patient isolation unit also contains a HEPA filter (32) and an exhaust fan (33), which are both shown in figure 25. In U.S. Patent No. 6,119,689, Korman discloses a personal air filtering and delivery system that utilizes a plurality of filters to purify the air to be sent to the patient. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Yachi et al.

to utilize a plurality of filters instead of just one HEPA filter because more filters would maximize the purification of the air to be exhausted into the atmosphere and prevent the spread of unsterilized microorganisms.

10. What is claimed in claim 3 is “a personal isolation apparatus according to claim 1, wherein said filter device includes: a duct connected to the hood through the UV sterilizer, a primary filter formed in a front end portion of the duct at a suction port of the duct for preliminarily filtering off the droplet(s) as sprayed from the patient, a secondary filter formed in the duct following the primary filter for further removing micro-particles as laden in the inlet air streamflow, and an exhaust fan formed in the duct at a downstream of the secondary filter for sucking an inlet air from the hood through the UV sterilizer and the filters in the duct and for discharging an outlet air through a discharge port formed in a rearmost end of the duct.” Yachi et al. disclose a patient isolation unit wherein a filter device (5), shown in figure 25, includes a duct (4) connected to the flexible envelope (3) and an exhaust duct (5b) through a UV sterilizer in the form of a UV lamp (31), a primary HEPA filter (32) secured at a suction port of the duct for filtering off small particles including microorganisms, and an exhaust fan formed in the duct at a downstream of the filter device for suctioning inlet air from the isolation unit through the UV sterilizer and the filters in the duct and for discharging an outlet air through an exhaust port (5c) at the end of the duct. Using a broad interpretation of the claims, the filter device housing (5a) is considered a duct that is connected to the envelope or hood by exhaust duct (5b) and duct (4). What Korman (6,119,689) discloses is a personal air

filtering and delivery system that utilizes a plurality of filters to purify air to be provided to a patient. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize two or more filters to maximize the purification of the air to be exhausted from the apparatus and prevent the spread of bacteria and other unsterilized microorganisms.

11. What is claimed in claim 7 is "a personal isolation apparatus according to claim 5, wherein said primary and secondary filters are detachable from the duct of the filter device for a safe and hygienic disposal of the filters when used without causing infection and contamination to the environment." In column 4 in lines 66 and 67 and in column 5 in lines 1-17, Korman states that the filters utilized in his personal air filtering and delivery systems "may be easily removed and replaced by removing cover 40." It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the filters within the apparatus to be removable because once the filters are saturated with contaminants and other particles they lose their efficiency and will begin to allow unwanted particles into the atmosphere. Also if the filters are removable, they can be cleaned so that they may be reused later, or they may be disposed of properly to prevent infectious bacteria and virus to be released into the environment.

12. Claims 4, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,966,937 to Yachi et al. in view of U.S. Patent No. 6,119,689

Art Unit: 3743

to Korman as applied to claim 1 above, and further in view of U.S. Patent No. 4,317,661 to Sasaoka et al.

13. What is claimed in claim 4 is "a personal isolation apparatus according to claim 3, wherein said primary filter is made of non-woven cloth for filtering the droplets as sprayed from the patient." After reviewing the specification of the invention, the examiner has concluded that the applicant did not express any criticality for using a non-woven cloth material to make the filter. Therefore any material that can effectively purify air that is contaminated with bacteria or microorganisms would sufficiently be an acceptable design choice. Also in U.S. Patent No. 4,317,661 to Sasaoka et al., an electric air cleaner is disclosed and within the specification in column 2 in lines 66-68, Sasaoka recites that his dielectric filter is made of a non-woven cloth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a non-woven cloth material for the filter because it is an effective material to remove contaminants within a gas or air.

14. What is claimed in claim 5 is "a personal isolation apparatus according to claim 3, wherein said secondary filter is a high-efficiency particulate air filter made of non-woven cloth for removing micro-particles including SARS virus." The patient isolation unit disclosed by Yachi et al. utilizes a high efficiency particulate air filter (HEPA filter) to remove microorganisms including germs and bacteria, which would include the SARS virus. After reviewing the specification of the invention, the examiner has concluded

Art Unit: 3743

that the applicant did not express any criticality for using a non-woven cloth material to make the filter. Therefore any material that can effectively purify air that is contaminated with bacteria or microorganisms would sufficiently be an acceptable design choice. Also in U.S. Patent No. 4,317,661 to Sasaoka et al., an electric air cleaner is disclosed and within the specification in column 2 in lines 66-68, Sasaoka recites that his dielectric filter is made of a non-woven cloth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a non-woven cloth material for the filter because it is an effective material to remove contaminants within a gas or air.

15. What is claimed in claim 6 is “ a personal isolation apparatus according to claim 5, wherein said secondary filter includes incorporation of activated carbon and virus-removing agent in the secondary filter.” After reviewing the specification of the invention, the examiner has concluded that the applicant never expressed any criticality for incorporating both activated carbon and virus-removing agent in the secondary filter. The applicant recites on page 4 in lines 12 and 13 that “an activated carbon or other virus-removing agent may be incorporated in the secondary filter (23).” This statement by the applicant acknowledges that activated carbon is in fact a virus-removing agent and that either one could be used in the secondary filter, with no acknowledgment of using both within the filter. Also in U.S. Patent No. 6,119,689 Korman discloses a personal air filtering and delivery system that supplies purified air to a patient. As recited by Korman in claim 3, “what is claimed is: an air filtration device according to

Art Unit: 3743

claim 2, wherein the prefilter means is an activated carbon felt material.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize activated carbon or any other virus-removing agent to remove any bacteria or virus that may have passed through the first or primary filter and further improve the effectiveness of the purification system by preventing the release of dangerous microorganisms.

Allowable Subject Matter

16. Claims 2, 8, 9, 10, 11, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amadeus S. Lopez whose telephone number is (571) 272-7937. The examiner can normally be reached on Mon-Fri 8:00AM-4:30PM.

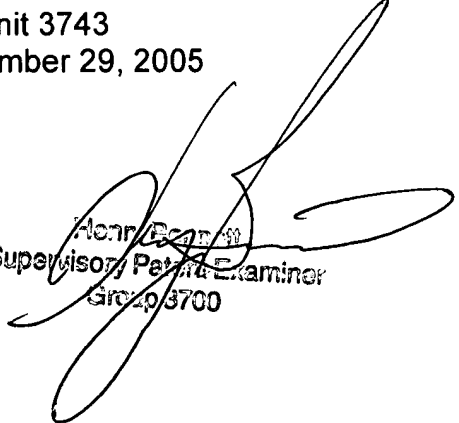
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on (571) 272-4791. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amadeus S Lopez
Examiner
Art Unit 3743
December 29, 2005

ASL


Henry B. Smith
Supervisory Patent Examiner
Group 3700